A   **A7016**

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Reg No.:_____   Name:_____

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIFTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2017

Course Code: IT301

Course Name: SOFTWARE ARCHITECTURE AND DESIGN PATTERNS (IT)
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Max. Marks: 100   Duration: 3 Hours

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PART A

Answer any two full questions, each carries 15 marks.
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<div align="right">Marks</div>

1	a)	Explain about Umbrella Activities of software process.	(5)
	b)	Describe Water Fall Model and Incremental Model.	(8)
	c)	What is Efficiency?	(2)
2	a)	Explain about different Process Flows.	(6)
	b)	Explain Robustness.	(4)
	c)	Short note on Flexibility, and Reusability	(5)
3	a)	Discuss about Spiral and RAD Model with neat diagram.	(8)
	b)	Explain about Informal and formal approaches to correctness.	(7)

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PART B

Answer any two full questions, each carries 15 marks.
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4	a)	Explain Unified Modeling Language.	(3)
	b)	Prepare Sequence diagram for Two Party Mobile Phone Call.	(7)
	c)	Explain pipe and filters.	(5)
5	a)	List different use case relationships	(5)
	b)	Explain event based styles and data-cantered styles.	(10)
6	a)	Differentiate Inheritance and Association relationship used in class diagram	(5)
	b)	Prepare Activity Diagram for order processing of Online Purchase System.	(6)
	c)	Explain software architectural style .list some examples.	(4)

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PART C

Answer any two full questions, each carries 20 marks.
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7	a)	Explain sequence diagram of Prototype Pattern.	(4)
	b)	Construct an observer design pattern for converting a decimal value into Binary, Hexadecimal and octal values.	(10)
	c)	Explain with example Façade Structural pattern. Consider a simple banking example that allows users to make deposit to customer accounts and obtain balance.	(6)
8	a)	What is Design pattern?	(5)
	b)	Explain chain of responsibility. Consider a situation in job portal application, where students update their profile. Prepare chain of responsibility class model.	(10)
	c)	Explain about composite class model.	(5)
9	a)	Explain Abstract Factory Method. Suppose that there are three different shapes rectangle, square and circle. The shapes are available in three different colours namely red, blue, green .Draw the Abstract Factory to represent to draw shape having any of above three colours.	(12)
	b)	Explain Mediator class model in Java API.	(5)
	c)	Explain the design purpose of Template.	(3)

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